ECON 317 - Money, Banking, and Financial Institutions

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Exchanges Rates

Exercise 1 - Currency Appreciation and Competitiveness

Based on the exchange rates indicated in the table below for the first trading days in 2007 and 2008, state whether the US dollar appreciated or depreciated during 2007. Also, specify for each case whether American goods and services became more or less attractive to foreigners.

Table 1: Exchange Rate Comparison

	January 2, 2007	**January 2, 2008**
a)	1.97$ US to buy 1 British pound	1.98$ US to buy 1 British pound
b)	32.38 Taiwanese dollars to buy 1$ US	32.43 Taiwanese dollars to buy 1$ US
c)	118.82 yen to buy 1$ US	109.72 yen to buy 1$ US
d)	1.21 Swiss francs to buy 1$ US	1.21 Swiss francs to buy 1$ US

Exercise 2 - Exchange Rate: A Practical Case

Here is an excerpt from an article in the newspaper *"Le Devoir"* from September 7, 2018, titled "Emerging Economies Hit by Currency Crisis."

> Initially confined to Turkey and Argentina during the summer, the debacle of emerging currencies has now spread to South Africa and Indonesia, while sparing developed economies for the time being. Many emerging currencies have suffered since the beginning of the week: the Indonesian rupiah is trading near levels last seen during the Asian currency crisis of the late 1990s, the South African rand and the Russian ruble are at their lowest in two years, while the Turkish lira and the Argentine peso, particularly hit in August, have not really recovered. Illustrating this initial domino effect, the MSCI index, which includes a basket of about twenty emerging currencies, is at its lowest since spring 2017.
> "Emerging countries could all be affected by the rise in US interest rates or a capital withdrawal, but they have varying capacities to absorb this impact," says Joydeep Mukherji, an analyst for Standard Poor's, in an interview with AFP. With US indicators remaining strong, the Federal Reserve is expected to continue raising interest rates, which strengthens the dollar.
>
> *Contagion Risk*

> (...) In this context, local currencies weaken, the cost of imports for emerging countries mechanically increases, and with it inflation, reinforcing foreign investors' desire to withdraw their investments—a vicious circle that is difficult to break.
> "Things could worsen, some ratings might be downgraded, but we do not anticipate any scenarios of payment defaults in these countries, as we believe they have enough flexibility to weather the crisis," reassures Joydeep Mukherji. "Economies with more flexible exchange rate regimes, disciplined monetary and fiscal policies, and adequate foreign exchange reserves should once again be the most resilient to the storm," note analysts at JP Morgan.
> While the specter of default has not yet been raised, should these upheavals in emerging economies nonetheless concern the most developed countries? "There is a risk of contagion to some developed economies, which could then spread to the rest of the economy. We typically think of Germany or Japan, two industrialized economies currently facing a slowdown in global demand," worries Véronique Riche-Florès.
> "The storm in emerging markets is intensifying, but for now, developed economies are holding up relatively well," notes the German bank LBBW in an analysis, citing the excellent performance of US indicators.

After reading the above text, answer the following questions:

1. What caused the decline in the value of many emerging countries' currencies in 2018?
2. Use the supply and demand graph for currencies to illustrate the situation of emerging countries described in the article.
3. What are the consequences of the decline in the value of their currencies for emerging countries?
4. The article mentions a "contagion risk." Explain how a decrease in GDP in emerging countries could spread to developed countries.

Exercise 3 - Determinants of the Short-Term Exchange Rate

Assume that Canada and the European Union (EU) are the only two countries engaging in trade and financial relations in the world. How will the value of the Canadian dollar evolve in the following cases, all else being equal?

1. The EU lifts some of its import restrictions.
2. Interest rates in Canada rise significantly.
3. Inflation increases rapidly in the EU compared to Canada.

4. The Bank of Canada prints new Canadian dollar bills to support government policies during the COVID-19 crisis.

5. The Bank of Canada decides to raise interest rates in Canada to counter a sharp increase in housing prices, while interest rates in the EU remain stable and low.

Exercise 4 - Determinants of the Long-Term Exchange Rate

1. Provide the formula for the real exchange rate.

2. What is the main determinant of changes in the real exchange rate in the short term? In the long term?

3. According to the theory of relative purchasing power parity (PPP), how does the real exchange rate evolve in the long term?

4. According to the theory of relative PPP, how will the nominal exchange rate of the Canadian dollar evolve in the long term if inflation is higher in Canada than in the rest of the world?

5. Suppose that inflation is 8% in Canada and 3% in Mexico.

   a) What would be the change in the nominal exchange rate of the Canadian dollar to maintain purchasing power parity (price equality in the same currency) between Canada and Mexico?

   b) In reality, the value of the Canadian dollar decreases from 12.5 to 10.25 Mexican pesos. Assume that the law of one price does not hold.

      – Given the inflation and the actual change in the nominal exchange rate, calculate the change in the real exchange rate g_E.

      – Which goods become more attractive under these conditions?